

CLAIMS (31209)

What is claimed is

1. A method for motion compensation video, comprising:
  - (a) assessing parameters of a packetized transmission channel;
  - (b) assessing sizes of intra-coded frames and predictively-coded frames for an input video;
  - (c) setting the rate of intra-coded frames and the rate of predictively-coded frames by maximizing a probability of correct frame reconstruction using the results of steps (a) and (b), wherein said probability of correct frame reconstruction includes a rate of repeated transmission of predictively-coded frames.
2. The method of claim 1, wherein:
  - (a) said transmission channel is the Internet; and
  - (b) said predictively-coded frames are P-frames.
3. The method of claim 1, wherein:
  - (a) said parameters of step (a) of claim 1 include the packet loss rate over said transmission channel.
4. The method of claim 3, wherein:
  - (a) said probability is taken as  $q_0(1-p_{e0})/(q_0 + q_1p_{e1})$  where  $q_0$  is the probability of an intra-coded frame,  $q_1$  is the probability of a predictively-coded frame,  $p_{e0}$  is the probability of a transmitted intra-coded frame being lost, and  $p_{e1}$  is the probability of a transmitted predictively-coded frame being lost.
5. A motion compensation controller for video, comprising:
  - (a) a first input for channel parameters of a packetized transmission

channel;

- (b) a second input for video parameters; and
- (c) a probability maximizer coupled to said first and second inputs and with an output of an intra-coded frame transmission rate over said channel, a predictively-coded frame transmission rate over said channel, and a repetition rate for transmission of said predictively-coded frames over said channel; said probability maximizer maximizes a probability of correct frame reconstruction using said first and second inputs wherein said probability of correct frame reconstruction includes a rate of repeated transmission of predictively-coded frames.